

09/977,507.

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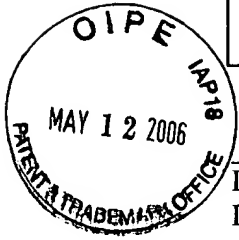
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV809549247US, on the date shown below in an envelope addressed to: Attention: Certificate of Correction Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: May 12, 2006

Signature:

(Sarah J. Buta)

Docket No.: 16159/090001; P5938
(PATENT)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:
David S. Allison

Patent No.: 7,028,289

Issued: April 11, 2006

For: STREAM OPERATOR IN A DYNAMICALLY
TYPED PROGRAMMING LANGUAGE

**REQUEST FOR CERTIFICATE OF CORRECTION
PURSUANT TO 37 CFR 1.322**

Attention: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Certificate
MAY 17 2006
of Correction

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted errors in the drawings which should be corrected.

On the Coversheet:

A drawing was erroneously omitted. Applicant respectfully requests a drawing (e.g. Figure 12) be inserted on the bottom of the coversheet.

In the Drawings:

Please delete Drawing sheets 1 thru 16 and replace with the attached fifteen drawings.

MAY 17 2006

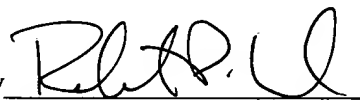
These drawings had been previously submitted by the Applicant. Enclosed for your reference is a copy of the Transmittal of Drawing Correction properly filed on January 20, 2006, which included all 15 of the corrected drawings. Accordingly, Applicant asserts errors were not in the application as filed by applicant; accordingly no fee is required.

Transmitted herewith is a proposed Certificate of Correction effecting such amendment. Patentee respectfully solicits the granting of the requested Certificate of Correction.

Applicant believes no fee is due with this request. However, if a fee is due, please charge our Deposit Account No. 50-0591, under Order No. 16159/090001 from which the undersigned is authorized to draw.

Dated: May 12, 2006

Respectfully submitted,

By 
Robert P. Lord
Registration No.: 46,479
OSHA · LIANG LLP
1221 McKinney St., Suite 2800
Houston, Texas 77010
(713) 228-8600
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MAY 17 2006

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 7,028,289
APPLICATION NO. : 09/977,507
ISSUE DATE : April 11, 2006
INVENTOR(S) : David S. Allison

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Coversheet:

A drawing was erroneously omitted. Applicant respectfully requests a drawing be inserted on the bottom of the coversheet.

In the Drawings:

Please delete Drawing sheets 1 thru 16 and replace with the attached fifteen drawings.

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Attention: Certificate of Correction Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: May 12, 2006

Signature:  (Sarah J. Buta)

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Robert P. Lord
OSHA · LIANG LLP
1221 McKinney St., Suite 2800
Houston, Texas 77010

1

MAY 17 2006



1/15

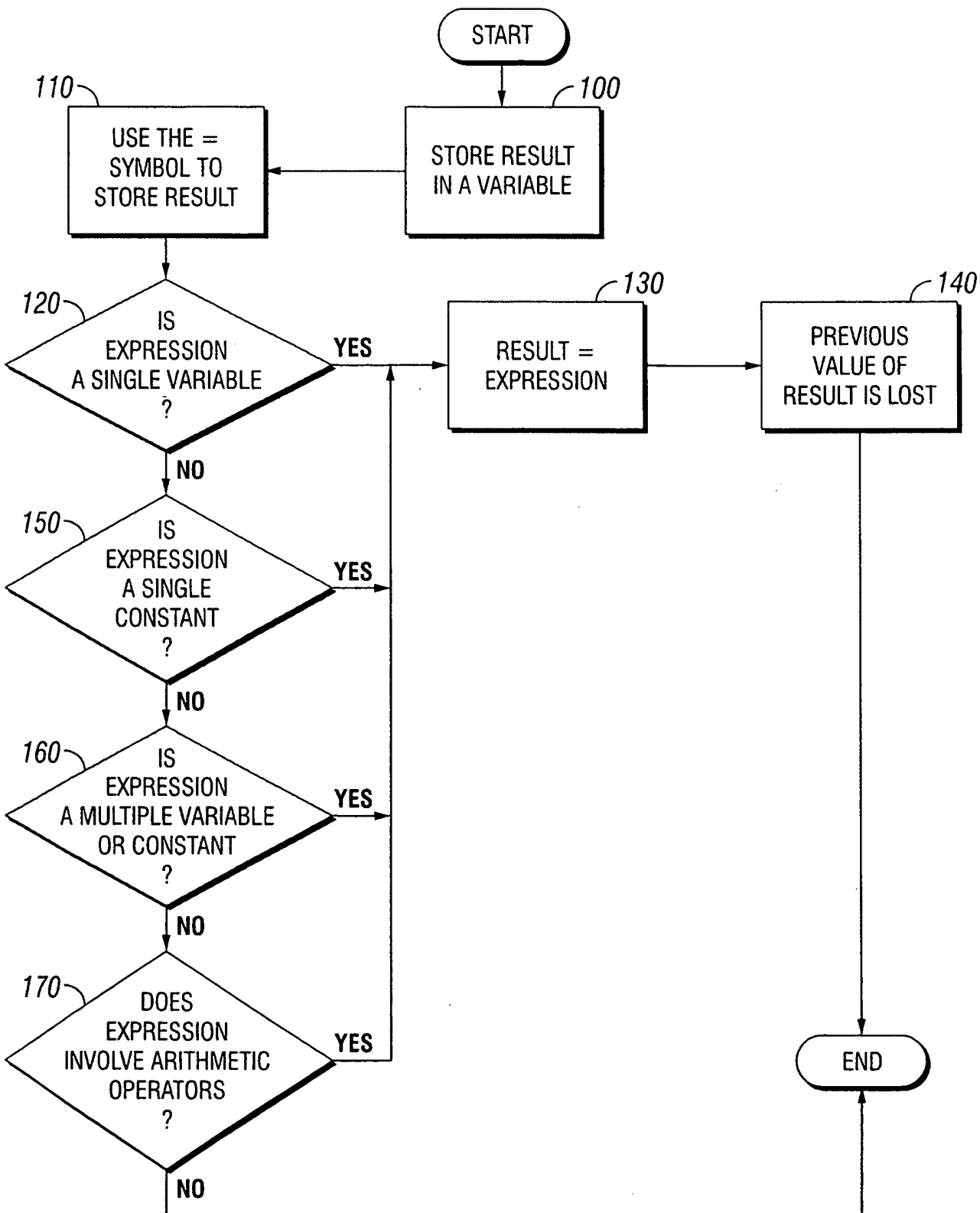


FIG. 1

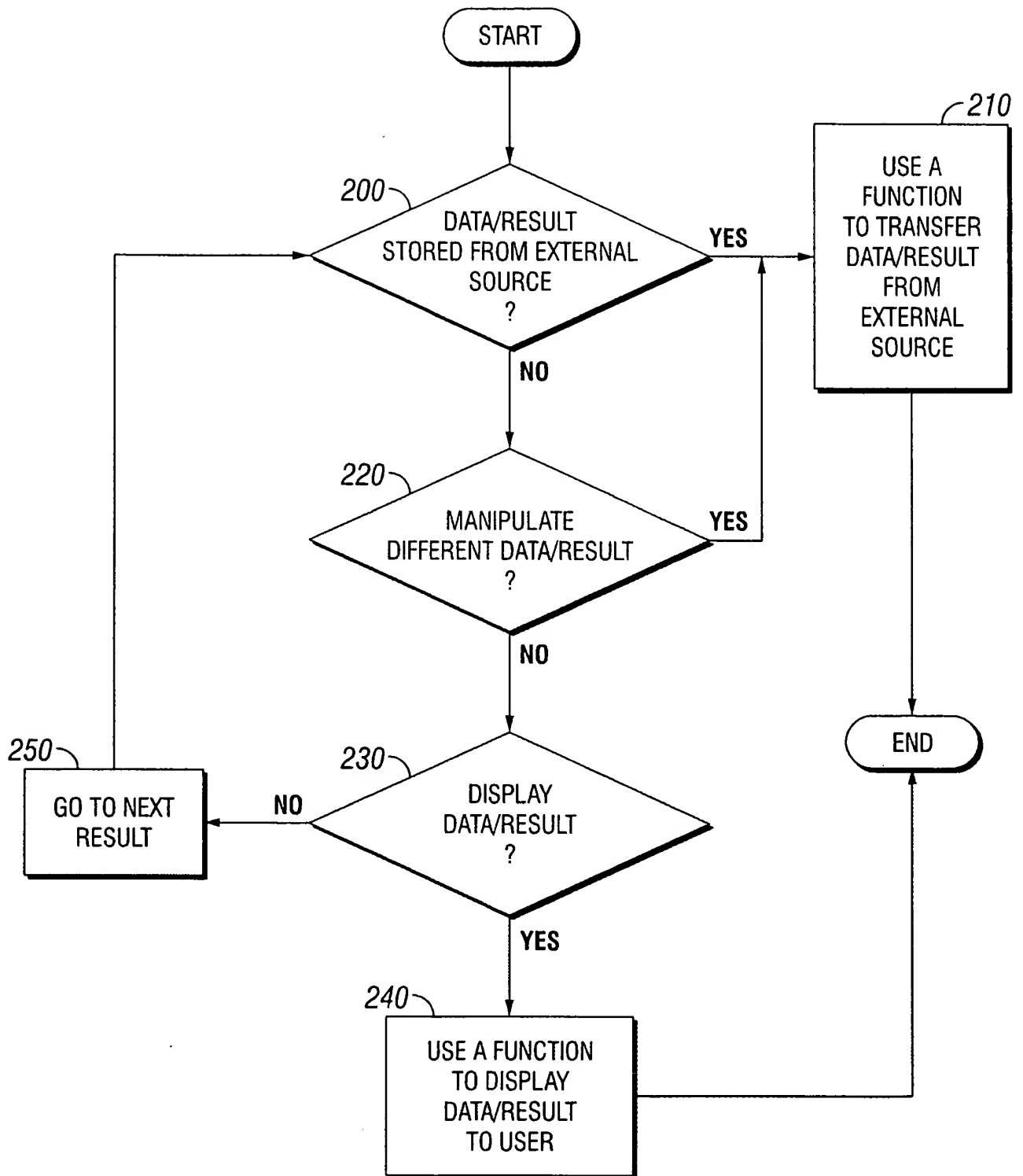
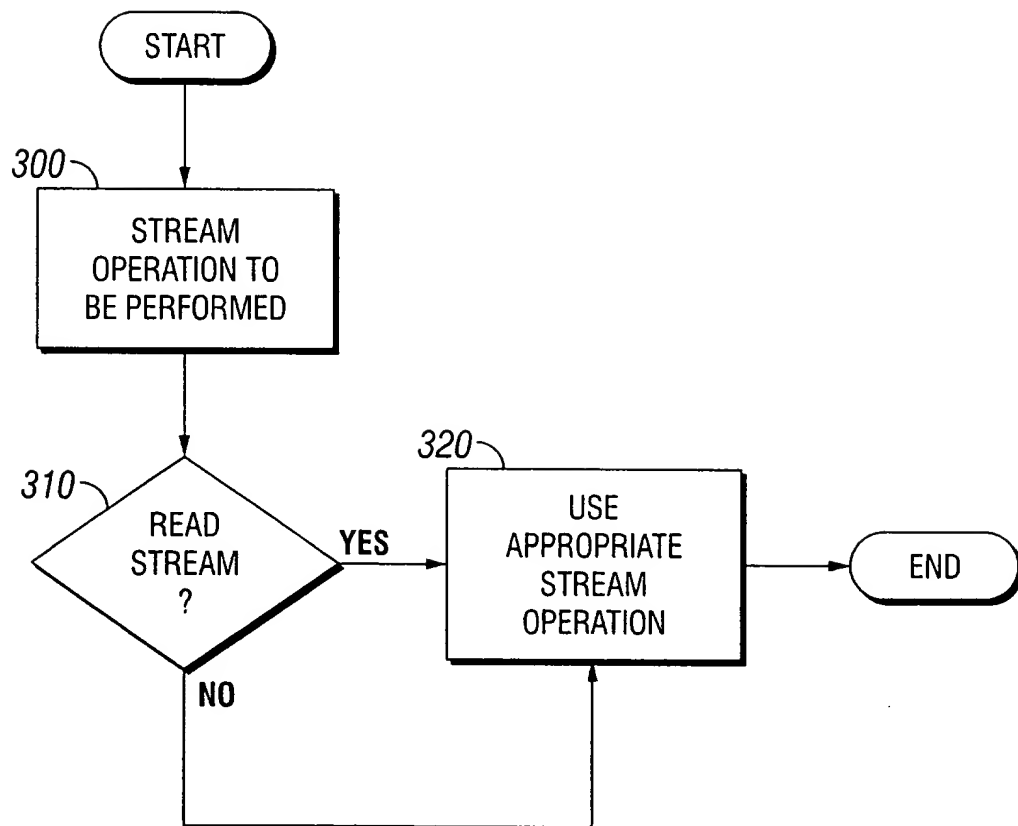


FIG. 2

**FIG. 3**

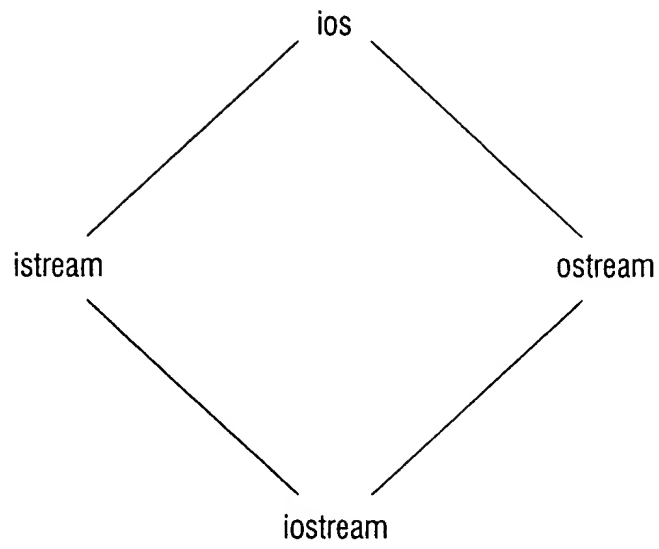


FIG. 4A

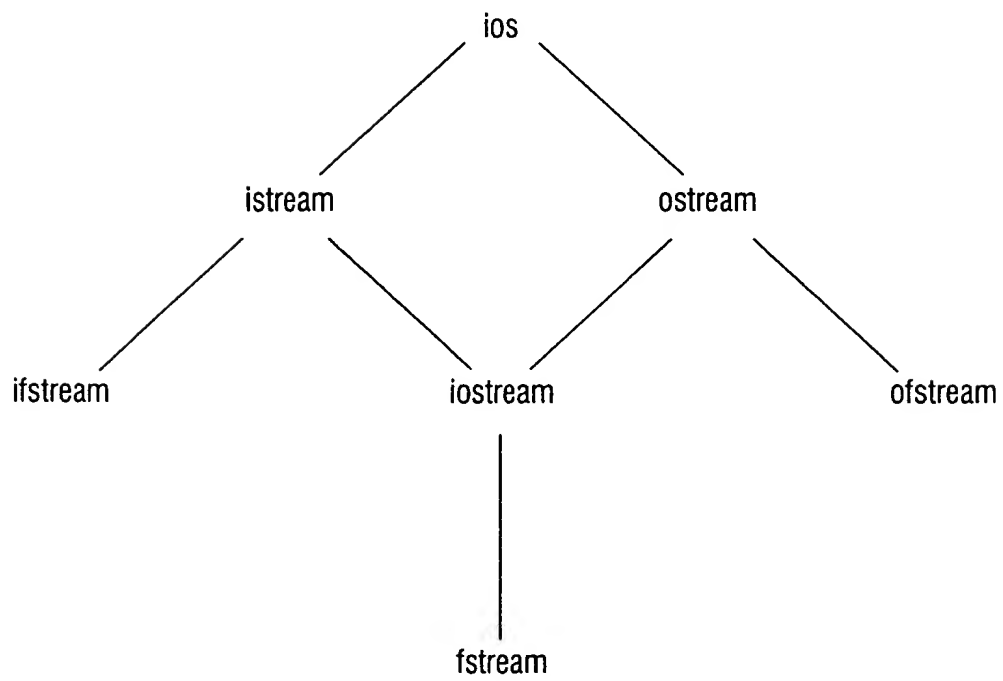
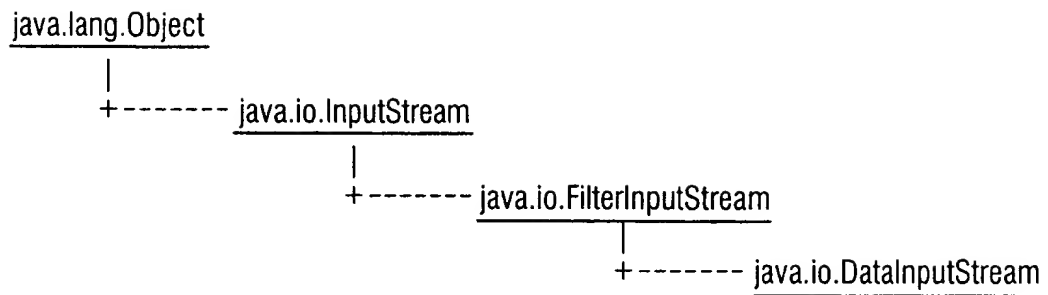
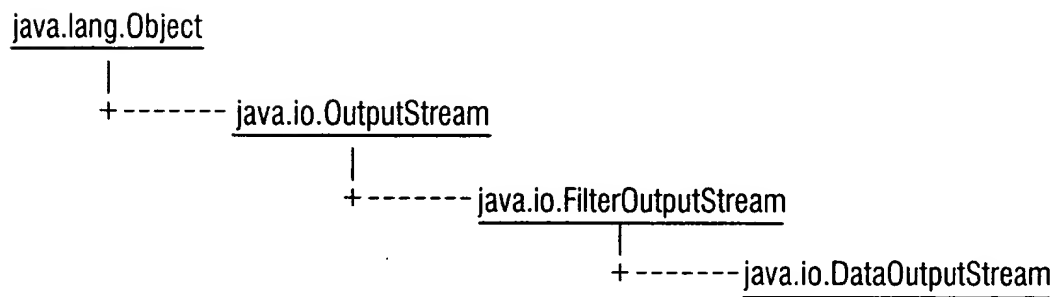


FIG. 4B

**FIG. 5A****FIG. 5B**

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| Function | Purpose |
|-----------------------|---|
| openin (filename) | Open the named file for input |
| openout (filename) | Open the named file for output |
| openup (filename) | Open the names file for update(reading and writing) |
| openfd (fd) | Open the integer file descriptor as a stream |
| open (filename, mode) | Open the named file with the given integer mode |

FIG. 6A

| Function | Meaning |
|--|---|
| Network.open (addr,port) | Open an active network connection (TCP) |
| Network.openServer (addr,port, type) | Open a passive network connection (TCP or UDP) |
| Network.lookupName (name) | Consult a naming service to convert a network name to an address |
| Network.lookupAddress (ipaddr) | Consult a naming service to convert an integer IP address into a host name |
| Network.accept () | Wait for and accept an incoming connection |
| Network.openSocket () | Open a UDP client socket for sending datagrams |
| Network.send (socket, addr, port, buffer) | Send a UDP datagram to the given socket. The addr and port specify the recipient. The buffer is the string to send |
| Network.receive (socket, var addr, var port, maxbuffer = 4096) | Wait for an incoming UDP datagram. Blocks until a datagram is received, then returns the data as a string. Also sets the addr and port to the sending address. The maxbuffer argument specifies the max size of data that can be received |
| Network.peek (socket, var addr, var port, maxbuffer = 4096) | As receive, but don't extract the data from the network. A call to receiver() will read the data. |
| Network.formatIPAddress (addr) | Build a string of the form n.n.n.n out of an integer IP address. |

FIG. 6B

| Data type | Reading | Writing |
|----------------------|--|------------------------------------|
| integer | Decimal integer converted to binary | Decimal interger |
| string | Whole line read - terminated by line feed character which is discarded | Characters written to stream |
| real | ASCII for real value | Written as ASCII |
| char | Single character | Single character |
| vector | Each line of file appended to vector - line feed is retained | Each element written |
| map | cannot read | Elements written as first = second |
| enumeration constant | cannot read | Name of enumeration constant |

FIG. 7

| Operation | Result |
|--|---|
| close (stream) | The stream is closed. |
| select (stream, timeout) | Returns 1 if there is data waiting to be read from stream. Times out after timeout microseconds. |
| eof (stream) | Returns 1 if the stream is at the end of file. |
| flush (stream) | Flush the data remaining in the stream buffers. |
| getchar (stream) | Read a single character from the stream. Returns the character read. |
| getbuffer (stream) | Read all the available characters in the stream buffer. Returns a string containing all the characters. |
| availableChars (stream) | Returns the number of characters in the buffer. |
| setStreamAttribute (stream, attr, value) | Set the value of a stream attribute. |
| rewind (stream) | Rewind the stream to the start. |
| seek (stream, offset, whence) | Move to a new position in a seekable stream. |

FIG. 8

| Output type | Input type | Operation |
|----------------|------------|--|
| integer | integer | copy left to right |
| | real | real converted to integer |
| | string | string converted to integer if possible, 0 otherwise |
| | vector | first element converted to integer |
| | map | first element converted to integer |
| | char | converted to integer |
| | block | integer set to address |
| | enumconst | index into enumeration |
| | object | call toInteger() if present, otherwise address of object |
| | stream | one integer read from stream |
| real | integer | converted to real |
| | real | copied |
| | string | string converted to real if possible, 0.0 otherwise |
| | vector | first element converted to real |
| | map | first element converted to real |
| | char | converted to integer then real |
| | block | converted to integer then real |
| | enumconst | converted to integer then real |
| | object | toReal() called if present, error otherwise |
| | stream | one floating point number read from stream |
| string | integer | converted to string |
| | real | converted to string |
| | string | copied |
| | vector | each element appended to string |
| | map | each element appended to string |
| | char | converted to string |
| | block | name of block |
| | enumconst | name of constant |
| | object | toString() called if present, <u>blockname@address</u> if not |
| | stream | one line read from stream |
| char | integer | truncated to 8 bits |
| | real | runtime error |
| | string | first character in string |
| | vector | first element converted to char |
| | map | first element converted to char |
| | block | first character of name |
| | enumconst | 'A' = first const, 'B' = second, etc |
| | object | toChar() called if present, error if not |
| | stream | one char read from stream |

FIG. 9A

| Output type | Input type | Operation |
|------------------|------------|---|
| vector | object | toVector() called if present, otherwise object appended to vector |
| | anything | appended to vector |
| map | object | toMap() called if present, otherwise appended |
| | anything | appended as {x =x} |
| function | scalar | function called with single argument |
| | vector | function called once for each element. Element passed as parameter |
| | map | Function called for each element. Function has to arguments for left and right of map pair. |
| | stream | function called for each line of input |
| thread | | like function |
| class | | like function only new object created for each |
| package | | like class |
| enum | | runtime error |
| enumconst | | runtime error |
| object | | runtime error |
| stream | integer | converted to decimal character sequence |
| | real | converted to floating point character sequence |
| | string | each character written |
| | char | single character written |
| | vector | each element written |
| | map | each element written as left = right |
| | block | block name written |
| | enumconst | name of constant written |
| | object | "object" + address written |
| | stream | stream copied |

FIG. 9B

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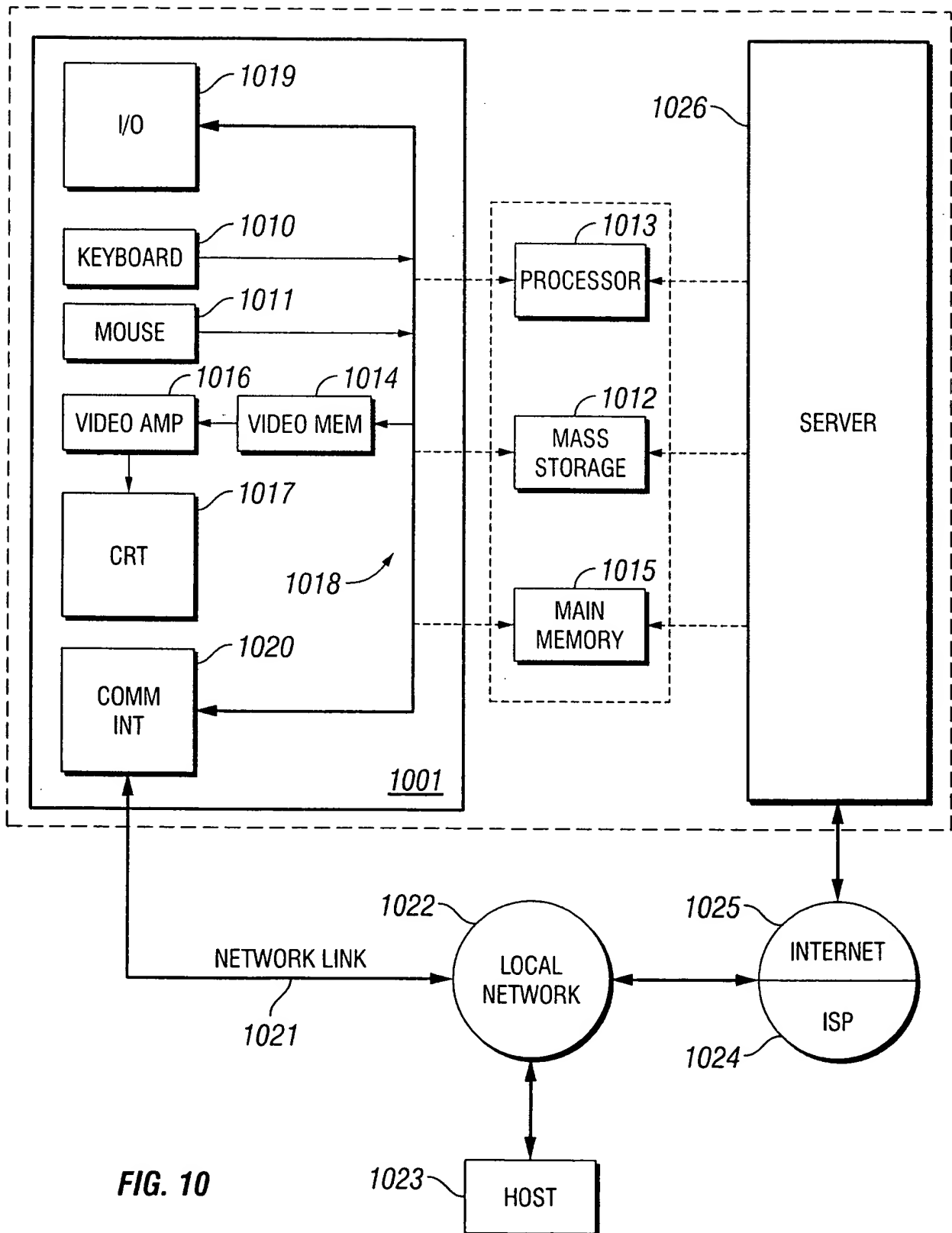


FIG. 10

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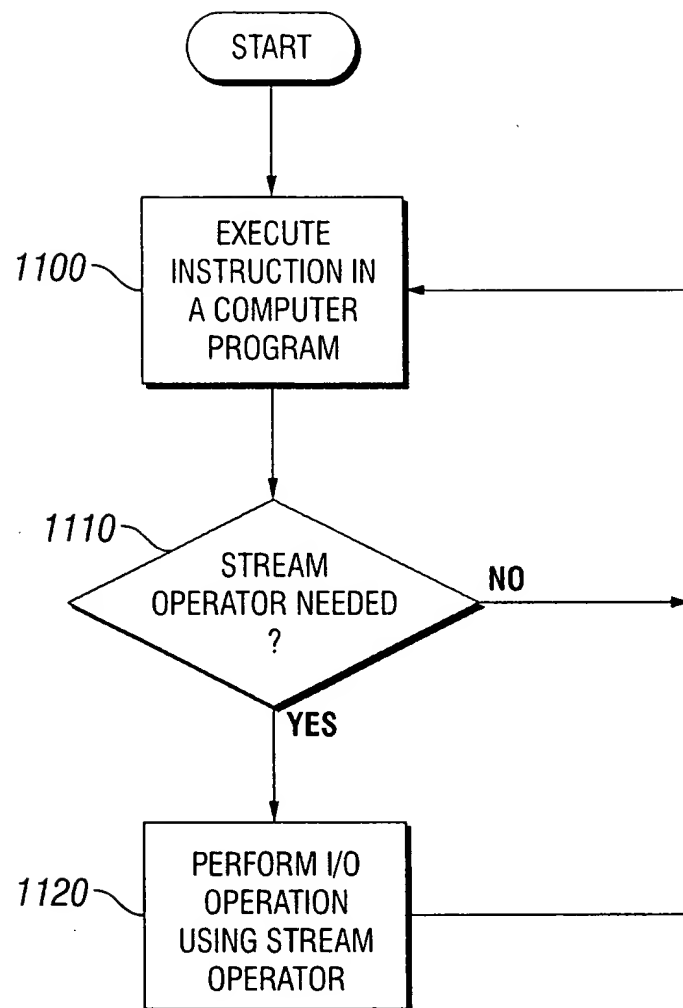


FIG. 11

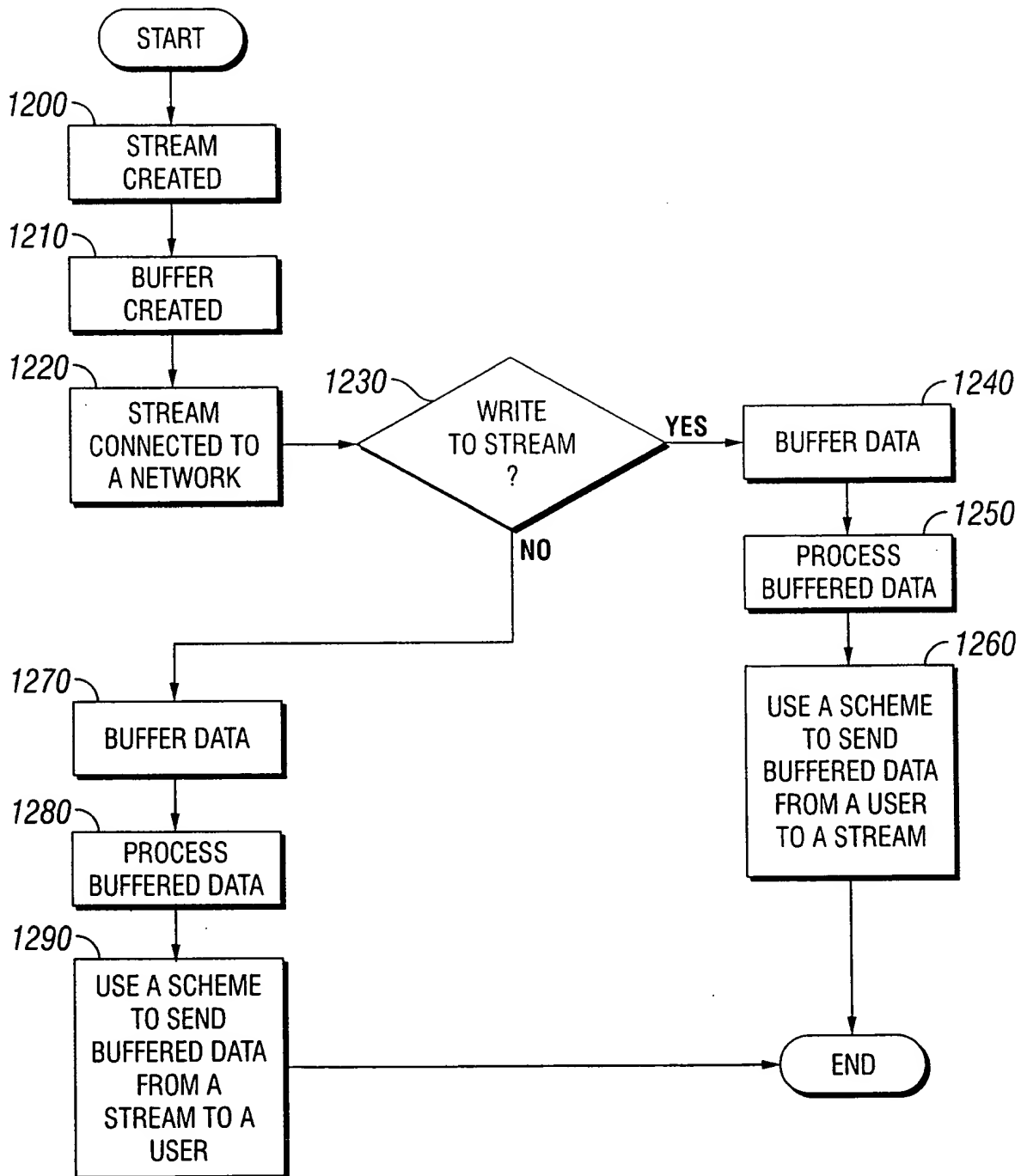


FIG. 12

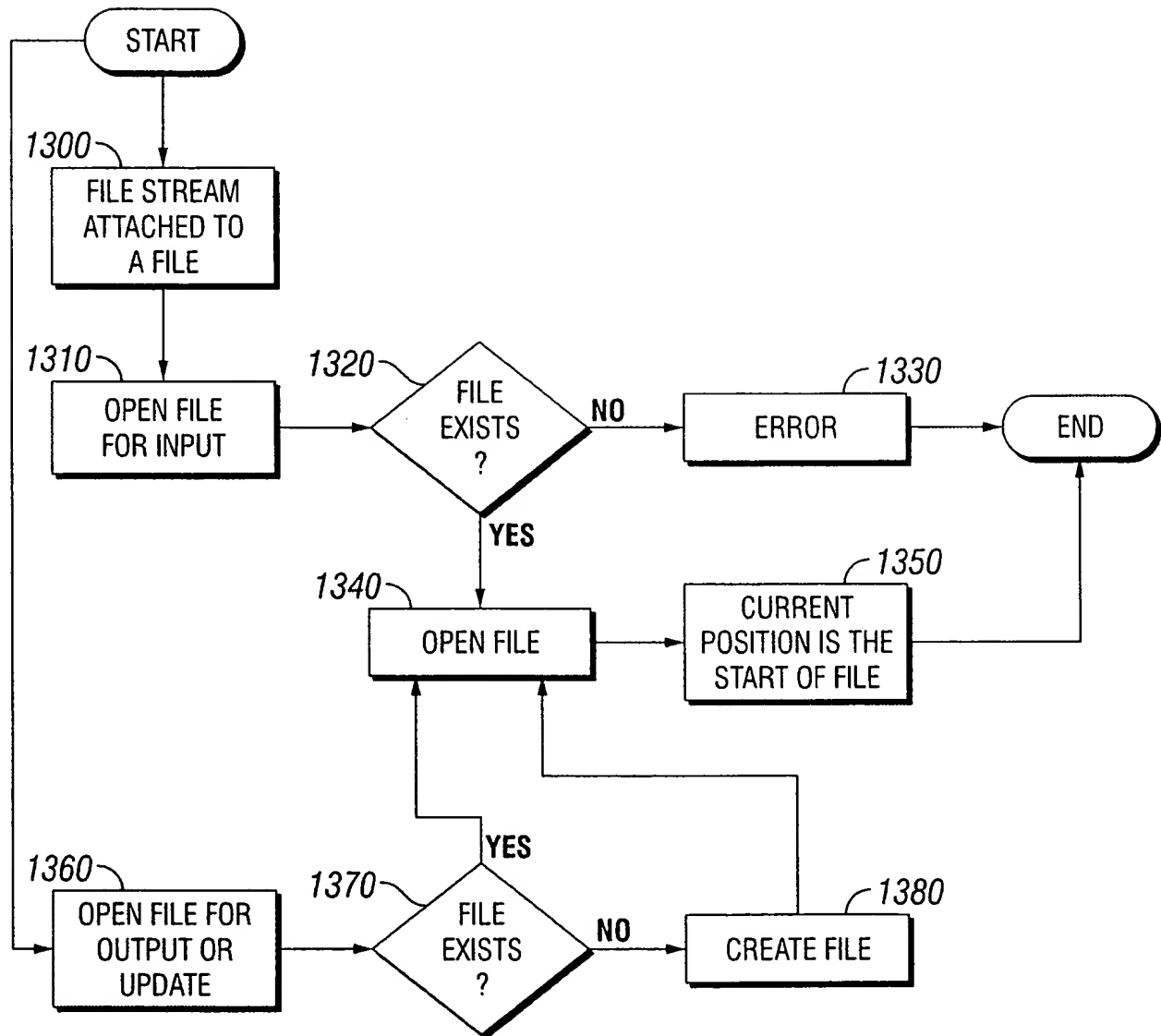


FIG. 13

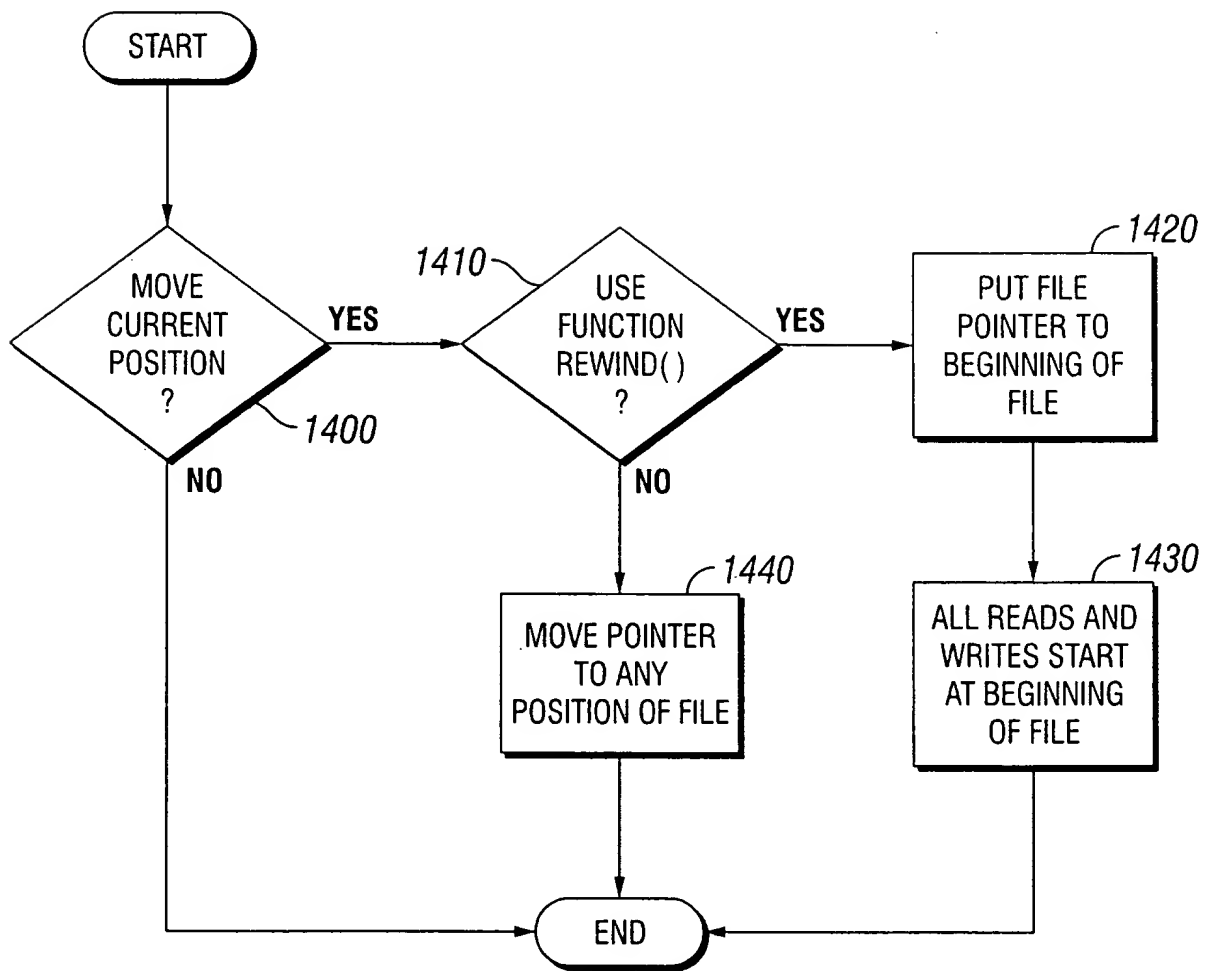


FIG. 14

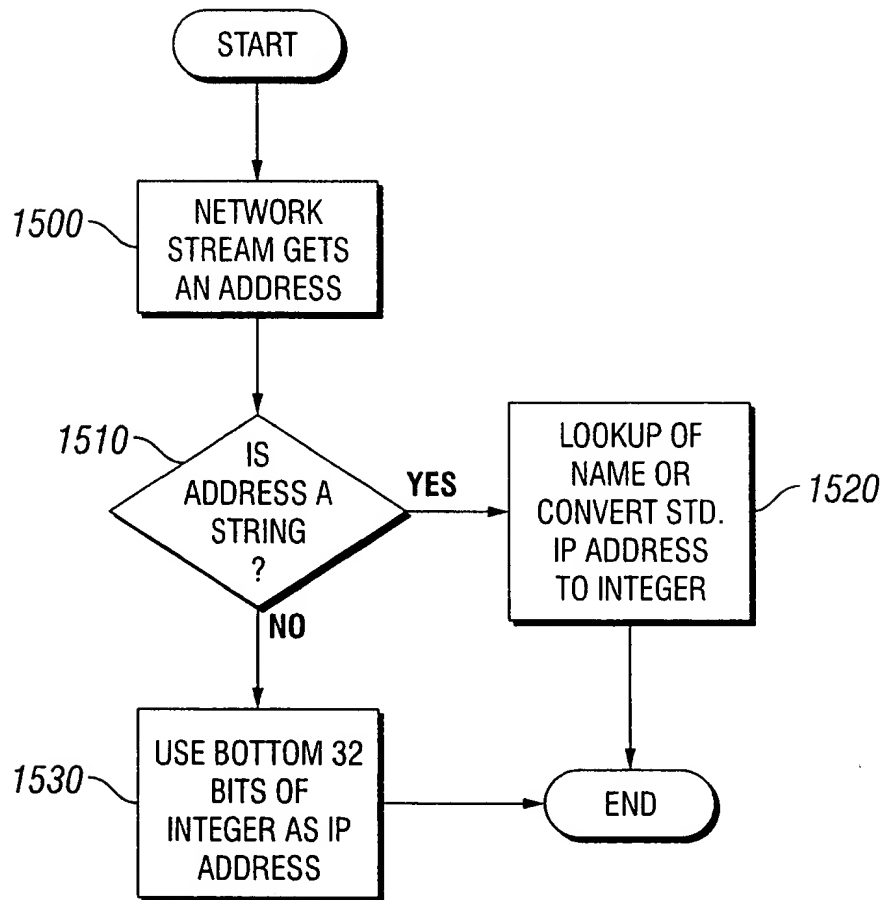
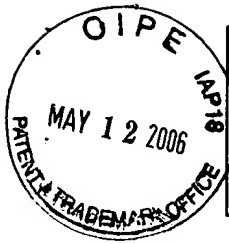


FIG. 15



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Dated: January 20, 2006

Signature:

Brenda C. McFadden
(Brenda C. McFadden)

Docket No.: 16159/090001; P5938
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
David S. Allison

Application No.: 09/977,507

Confirmation Number: 3875

Filed: October 12, 2001

Art Unit: 2124

For: STREAM OPERATOR IN A DYNAMICALLY
TYPED PROGRAMMING LANGUAGE

Examiner: T. D. Ingberg

TRANSMITTAL OF DRAWING CORRECTION

Office of Patent Publication
Attn: Joshua D. Chase
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Notice Regarding Drawings mailed on December 19, 2005, please find enclosed one set (fifteen sheets, nineteen figures) of corrected drawings for filing in the above-identified patent application. The enclosed drawings correct the informalities noted in the aforementioned notice.

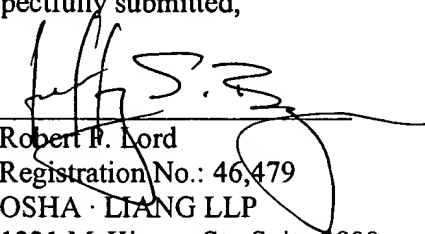
Favorable consideration of the enclosed drawings is respectfully requested.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0591, under Order No. 16159/090001 from which the undersigned is authorized to draw.

Dated: January 20, 2006

Respectfully submitted,

By



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